IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Christophe Lorin
Ser. No.:	09/367,623
Filed:	November 23, 1999
For:	METHOD FOR AUTOMATICALLY MATCHING THE LEVELS OF THE SIGNALS EXCHANGED IN A COMMUNICATION NETWORK
Examiner:	J. F. Harold
Art Unit:	2644

PETITION FOR WITHDRAWAL OF HOLDING OF ABANDONMENT

Mail Stop Petition
Commissioner of Patents
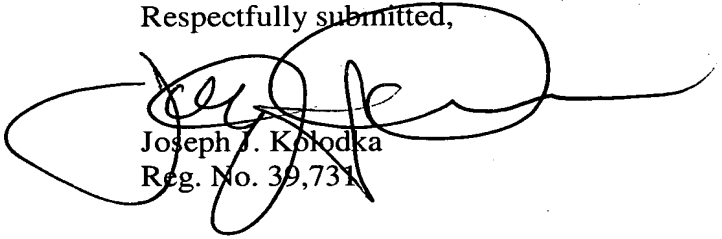P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants respectfully petition for the withdrawal of the holding of abandonment of the present application as indicated in the Notice of Abandonment for failure to timely file a proper reply to the Office Action mailed on February 9, 2004, a copy of which is attached hereto. Please charge the fee for filing this Petition, and any other necessary fees, to our Deposit Account No. 07-0832. Applicants respectfully request that the Notice of Abandonment be withdrawn based upon the fact that Applicants timely filed a reply to the outstanding Office Action, and received acknowledgement of the receipt of the reply. The undersigned practitioner, as the attorney of record, makes the following statements in support of this Petition:

I, Joseph J. Kolodka, hereby attest to the fact that a search of the file jacket and docket records substantiates that Applicants timely filed a reply on July 28, 2004, to an Office Action having a shortened period for response set to expire on May 9, 2004. The reply included a Response and a Petition for Extension of Time Under 37 C.F.R. 1.136(a). Applicants received a return postcard indicating receipt of the reply by the USPTO on July 30, 2004. Enclosed with this petition are a copy of the reply filed in response to the outstanding Office Action, which is attached as Exhibit A, and a copy of the return postcard, which is attached as Exhibit B.

In view of the above, Applicants submit that a timely reply was filed and properly received by the USPTO, and accordingly, respectfully request that this Petition be granted and the outstanding Notice of Abandonment be withdrawn. Please charge any fees associated with the Petition to Deposit Account 07-0832. If there are any further questions regarding this Application, please contact the undersigned at 609-734-6816.

Respectfully submitted,

Joseph J. Kolodka
Reg. No. 39,731

Thomson Licensing Inc.
Patent Operations
PO Box 5312
Princeton, NJ 08543-5312

<u>Certificate of Mailing under 37 CFR 1.8</u>
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in a postage paid envelope addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Date: 7-12-05

Lori Klewin

09/367,623

JUL 1 4 2005

RCA89726

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: LORIN, CHRISTOPHE   :

                                          :   Examiner: Harold, J. F.
Serial No.:   09/367,623   :   Group Art Unit: 2644

Filed: 23 November 1999   :

For: METHOD FOR AUTOMATICALLY   :
      MATCHING THE LEVELS OF THE   :
      SIGNALS EXCHANGED IN A   :
      COMMUNICATION NETWORK   :

                                          :

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE TO ACTION MAILED 9 February 2004 (Paper No. 10)

Dear Sir:

This communication is responsive to the Office Action dated 9 February 2004. Kindly

enter the following amendments:

Amendments to the Claims are reflected in the listing of claims that begins on page 2 of this

paper.

Remarks begin on page 6 of this paper.

This listing of claims replaces all prior versions and listings of claims in the application:

6

1. (Currently Amended)   Method for automatically matching the levels of the signals exchanged between a first apparatus and a second apparatus which communicates with the said first apparatus via a transmission line, characterized in that it comprises the following steps:

the signal which comes from the transmission line and is received by the first apparatus is digitized,

12   on the basis of the digital data representing the signals exchanged with the transmission line, an estimate is made of the transfer function equal to the ratio of the signal received by the first apparatus to the signal transmitted by the first apparatus, the estimate of the transfer function is defined in the following way:

$$\frac{OUT2}{IN1} = K(Z_L) + \varepsilon$$

where

18        $$K(Z_L) = \frac{Z_L}{2 \cdot (Z_L + 2 \cdot R_1)}$$

and Z_L represents the impedance of the transmission line, while R1 represents the source impedance of the transmission line,

- the following are calculated:

for the transmitter signal, the first gain G1

$$G1(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)}$$

24   and for the received signal, the second gain G2

$$G2(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)} .$$

each of the exchanged signals is respectively multiplied by a suitable gain determined on the basis of the estimated value of the said transfer function.

2. (Cancelled)

30

3. (Previously Presented)   Method according to Claim 1, characterized in that the gain of the

6   signal received by the first apparatus is chosen so that the component of the signal transmitted by

the second apparatus in the signal received by the first apparatus is independent of the impedance

of the transmission line.

4. (Previously Presented)   Method according to Claim 1, characterized in that the gain of the

signal transmitted by the first apparatus is chosen so that the component of this signal in the

12   signal received by the second apparatus is independent of the impedance of the transmission line.

5. (Previously Presented)   Method according to Claim 3, characterized in that the said

calculation method implements an identification algorithm.

6. (Cancelled)

18

7. (Currently Amended)   Device according to Claim [[6],] 12 characterized in that the block

has a unit for identifying the transfer function interacting with a calculation module which is

intended to supply a first amplification means with the first gain for matching the level of the

signal transmitted by the first apparatus, and to supply a second amplification means with the

second gain (G2) for matching the level of the signal received by the first apparatus.

24

8l (Currently Amended)   Device according to Claim [[5],] 12 characterized in that the

calculation block has a DSP circuit implementing an identification algorithm.

9. (Previously Presented)   Device according to Claim 8, characterized in that the

identification algorithm is of the LMS, RLS or Kalman type.

30

10. (Previously Presented)   Communication apparatus, characterized in that it has a device

according to Claim 6.

11. (Previously Presented)   Method for automatically matching the levels of the signals

exchanged between a first apparatus and a second apparatus that communicates with the first

6   apparatus via a transmission line, comprising the steps:

receiving and digitizing by the first apparatus the signal which comes from the

transmission line,

estimating, on the basis of the digital data representing the signals exchanged with the

transmission line, the transfer function (K) equal to the ratio of the signal received by the first

apparatus to the signal transmitted by the first apparatus, the estimate of the transfer function

12   (K) comprising $\dfrac{OUT2}{IN1} = K(Z_L) + \varepsilon$ where $K(Z_L) = \dfrac{Z_L}{2 \cdot (Z_L + 2 \cdot R_1)}$ and Z_L represents the

impedance of the transmission line , while R1 represents the source impedance of the

transmission line, the following are calculated: for the transmitter signal, the first gain G1

comprises $G1(Z_L) = \dfrac{1}{1 - 2 \cdot K(Z_L)}$ and for the received signal, the second gain G2 comprises

$G2(Z_L) = \dfrac{1}{1 - 2 \cdot K(Z_L)}$, and

multiplying each of the exchanged signals, respectively, by a suitable gain determined on

18   the basis of the estimating of a value of the transfer function (K).

4

12. (Previously Presented)   Device for automatically matching the levels of signals exchanged

6   between a first apparatus and a second apparatus communicating via a transmission line,

characterized in that it has:

an analogue/digital converter capable of digitizing a signal entering the first apparatus,

a digital/analogue converter capable of converting a signal transmitted by the first

apparatus,

a calculation block intended to estimate the ratio of the incoming signal to the signal

12   transmitted by the first apparatus, and to determine the gains needed for matching the levels of

the signals transmitted and received by the first apparatus, the gains being dependent a transfer

function (K) equal to the ratio of the incoming signal received by the first apparatus to the signal

transmitted by the first apparatus, the estimate of the transfer function (K) comprising

$$\frac{OUT2}{IN1} = K(Z_L) + \varepsilon \quad \text{where} \quad K(Z_L) = \frac{Z_L}{2 \cdot (Z_L + 2 \cdot R_1)} \quad \text{and } Z_L \text{ represents the impedance of the}$$

transmission line , while R1 represents the source impedance of the transmission line, the

18   following are calculated: for the signal transmitted, the first gain G1 comprises

$$G1(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)} \quad \text{and for the incoming signal received, the second gain G2 comprises}$$

$$G2(Z_L) = \frac{1}{1 - 2 \cdot K(Z_L)} \ .$$

REMARKS

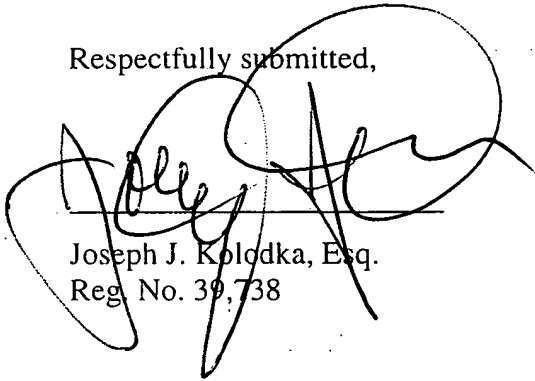Reconsideration of the application is respectfully requested.

Claims 11 and 12 are indicated as allowed. In reply to claim 2, the subject matter of claim 2 has been incorporated into claim 1 and claim 2 has been cancelled.

Claim 6 has been cancelled and claims 7 and 8 have been amended to depend from allowed claim 12.

Favorable reconsideration of this application is respectfully requested. Should there be any questions or other matters whose resolution may be advanced by a telephone call, the Examiner is cordially invited to contact Applicant's undersigned attorney at his number listed below. Any fees due and owing should be charged to deposit account no. 07-0832
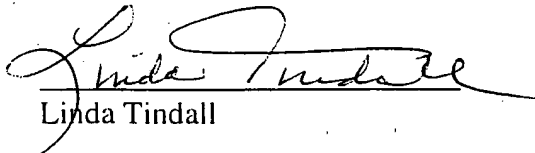
Respectfully submitted,

27 July 2004

Joseph J. Kolodka, Esq.
Reg. No. 39,738

Thomson Licensing Inc.
2 Independence Way
Princeton, New Jersey 08540
(609) 734-6816
(609) 734-6888 - facsimile

CERTIFICATE OF MAILING

I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to the Commissioner for Patents; P.O. Box 1450; Alexandria, VA 22313-1450 on:

7/27/04
Date

Linda Tindall

PTO/SB/22 (08-03)
Approved for use through 7/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)	Docket Number (Optional) PF970008

In re Application of Christophe Lorin

Application Number 09/367,623	Filed 11/23/99

For Method for Automatically Matching the Levels of the Signals Exchanged in a Communication Network

Art Unit 2644	Examiner J.F. Harold

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.

The requested extension and appropriate non-small-entity fee are as follows (check time period desired):

☐ One month (37 CFR 1.17(a)(1)) $_____

☐ Two months (37 CFR 1.17(a)(2)) $_____

☒ Three months (37 CFR 1.17(a)(3)) $950

☐ Four months (37 CFR 1.17(a)(4)) $_____

☐ Five months (37 CFR 1.17(a)(5)) $_____

☐ Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee amount shown above is reduced by one-half, and the resulting fee is: $ _____ .

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 07-0832 .
I have enclosed a duplicate copy of this sheet.

I am the   ☐ applicant/inventor.

         ☐ assignee of record of the entire interest. See 37 CFR 3.71

            Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

         ☒ attorney or agent of record. Registration Number 39731

         ☐ attorney or agent under 37 CFR 1.34(a).

            Registration number if acting under 37 CFR 1.34(a). _____ .

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

July 27, 2004	
Date	Signature
(609) 734-6816	Joseph J. Kolodka
	Typed or printed name

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/17 (10-03)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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FEE TRANSMITTAL
for FY 2004   JUL 1 4 2005

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT | ($) 950

Complete if Known

Application Number	09/367,623
Filing Date	11/23/99
First Named Inventor	Christophe Lorin
Examiner Name	J.F. Harold
Art Unit	2644
Attorney Docket No.	PF970008

METHOD OF PAYMENT (check all that apply)

☐ Check   ☐ Credit card   ☐ Money Order   ☐ Other   ☐ None

☒ Deposit Account:

Deposit Account Number	07-0832
Deposit Account Name	THOMSON LICENSING INC.

The Director is authorized to: (check all that apply)
☒ Charge fee(s) indicated below ☒ Credit any overpayments
☐ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, **except for the filing fee**
to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity			
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($) 0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims	Fee from below	Fee Paid
Total Claims	- ** =	0	X	= 0
Independent Claims	- ** =	0	X	= 0
Multiple Dependent			X	= 0

Large Entity		Small Entity		
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 0

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

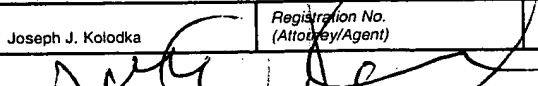| Large Entity		Small Entity			
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	950
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive – unavoidable	
1453	1,330	2453	665	Petition to revive – unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 950

SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Joseph J. Kolodka	Registration No. (Attorney/Agent)	39,731	Telephone	609-734-6816
Signature				Date	7/28/04

Report to Data Base

PATENT OPERATIONS

MAILING TO U.S. Patent and Trademark Office

ATTN: Mail Stop AMENDMENT

Docket No. PF970008   Serial No. 09/367,623   Filed: 11/23/99   Patent No. _____
Inventors: Christophe Lorin
Title: METHOD FOR AUTOMATICALLY MATCHING THE LEVELS OF THE SIGNALS EXCHANGED IN A COMMUNICATION NETWORK
☐ et al.   Atty: Joseph J. Kolodka/lat

(Stamp: OIPE JC106 JUL 3 0 2004 PATENT & TRADEMARK)

Customer No. 24498

Express Mail Application

Date Deposited:

APPLICATION AS FILED

Check Type	Check Items Mailed with Application
☐ Origl-US NAT	☐ Declaration
☐ Divisional	☐ Statement under CFR § 1.56-013M
☐ Continuation	☐ Assignment & Recordation Sheet
☐ CPA	☐ 090M Prelim. Amendment
☐ Reissue	☐ Priority Document
☐ Re-Exam	☐ 13M IDS
☐ US Provisional	☐ ISSUE Fee Transmittal
☐ Other	☐ Utility

Enter Date	Enter Number	AMENDMENTS		APPEALS	FEES
App. Mailed		Independent Claims			
005M		Claims in Excess			
		Claim Pages			
		Specification Pages			
		Sheets of Drawings			
		Abstract Pages			
Charge		Fees			

Mailed	Due	AMENDMENTS	Mailed	Due	Charge
7/28/04	5/9/04	008M After Rejection		032 Notice of Appeals	
		012M After Final Rejection		037M Appeal Brief	
		019M After Allowance U/R312		039M Reply Brief	
		083M Supplemental		133M Pet. To Withdraw.	7/28/04
		090M Voluntary		REQUESTS	
		079M Dwg. Correction(s) - 1		009M Ext Time§1.136(b)	
		Restriction		076M Cert. Corr.	7/28/04
		OTHER		OTHER	
		007M Lic. To For. File		027M Statement NASA	
		126M Reg. Priority 35USC119		086M Term. Disclaimer	
		131M Statement DOE		064M Claim Disclaimer	
		013M Statement under §1.56		062M Status Letter	
		013M IDS w/2 references		084M Declaration	
7/28/04		Certificate Of Mailing*		PETITION FOR EXPRESS ABANDONMENT	

FEES

	Due	Mailed	FEES
			006M Filing Fee Exp. Mail
			006M Filing Missing Parts
			021 Issue Fee
		7/28/04	009M Ext Time§ 1.136(a)
			Fee Transmittal PTO/SB/17
			Independent claims
	Charge	7/28/04	Amount of Fee $950.00
			OTHER
			081M Appt. Atty/Agent
			063M Asgn & Rec. Form
			066M Letter to PO
			068M Notif. of For. Ref.
			066M Corr. Of Record
			X M Please Specify: